

ABSTRACT OF THE INVENTION

Large diameter self-expanding endoprosthetic devices, such as stents and stent grafts for delivery to large diameter vessels, such as the aorta, are disclosed having very small compacted delivery dimensions. Devices with deployed dimensions of 26 to 40 mm or more are disclosed that are compacted to extremely small dimensions of 5 mm or less, enabling percutaneous delivery of said devices without the need for surgical intervention.

Compaction efficiencies are achieved by combining unique material combinations with new forms of restraining devices, compaction techniques, and delivery techniques. These inventive devices permit consistent percutaneous delivery of large vessel treatment devices.

Additionally, small endoprosthetic devices are disclosed that can be compacted to extremely small dimensions for delivery through catheter tubes of less than 1 mm diameter.